

Indirect Evaluative Focus: Influences on Self-Validation and Persuasive Impact

Undergraduate Research Thesis

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by

Lindsay Keeran

The Ohio State University

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Project Advisor: Dr. Duane T. Wegener, Department of Psychology

Abstract

Research on self-validation has been focused on identifying variables that affect the confidence of thoughts one has about a judgment target. One of the primary variables identified thus far is the credibility of the source of the information. The typical effect is that learning after a message that the source of the information is credible increases confidence in thoughts about the message, regardless of whether those thoughts are relatively favorable or unfavorable. This pattern is referred to as content-independent validation. However, more recent research found that depending on the focus of the evaluation of a persuasive message, different patterns of self-validation can occur. When focused on evaluating the source, thought confidence and attitudes reflective of these thoughts are influenced by both the strength of the arguments and source credibility (referred to as content-dependent validation). However, when focused on the content of the message, content-independent validation effects like those discussed above occur. In the present research, instead of explicitly directing participants to focus on the source or the content, indirect manipulations were used. Study 1 used a political context where participants were instructed to either imagine themselves as a voter or a constituent of a sitting senator, whereas Study 2 employed a “mindset priming” technique using pre-message judgment tasks. Study 1 produced some evidence consistent with content-independent validation in message-focus conditions, and Study 2 produced results that looked similar to content-dependent validation in source-focus conditions. Though neither study provided strong support for both types of validation in the same study, the results suggest that less direct methods for focusing people on evaluating sources or messages might be successful in creating the same types of effects as in previous studies that used more direct focus instructions. Implications of the indirect manipulations in persuasion are discussed.

Introduction

In everyday life, people encounter persuasive messages, shown in multiple forms like commercials on the TV, political speeches or magazine and newspaper articles. The goal of these messages is to influence people and try to make them hold a specific attitude or change the attitude about a particular object, person or action. Thus, the factors involved in persuasion are crucial to study. One theory that has come up in more recent work is called self-validation theory (Petty, Briñol, & Tormala, 2002). Self-validation is a metacognitive process that links the confidence a person has in his or her thoughts about an attitude object with the extent to which those thoughts influence the favorability of the resulting attitude. This paper focuses on that particular theory.

Reactions to Persuasive Messages

Previous research on the cognition that occurs when exposed to persuasive messages had found two dimensions crucial to the extent to which a persuasive message has influence: the extent of thinking and content of thoughts. The first refers to the amount that people think about something that could influence their attitudes. Multiple factors determine how much people think about an attitude object. One is motivation to identify and hold correct attitudes (Petty & Cacioppo, 1986). For example, Petty, Cacioppo, and Goldman (1981) found that message recipients were more affected by the quality of arguments provided in a persuasive message when the topic was likely to personally affect them a lot (high personal relevance) rather than a little (low personal relevance). In contrast, message recipients were more affected by the expertise of the source (learned prior to the message) when the topic was unlikely to personally affect them much (low personal relevance) rather than a great deal (high personal relevance). Another determinant of amount of processing is the message recipient's ability to think carefully

about the message. If a person is under high cognitive load (i.e. if distraction is increased), the amount of processing is reduced (Petty, Wells, & Brock, 1976). Manipulations of the strength of arguments (argument quality) in this research were found to influence favorability of thoughts. The idea in this and other related research is that when distraction is low, argument quality matters more. However, when there is higher distraction, argument quality effects are not as apparent. The second dimension that is important for a persuasive message's influence is the content of the thinking, particularly the valence of thoughts. Again, argument quality is one of the variables that has been most studied in the literature on thought favorability. When response to a persuasive message produces more thoughts that are favorable rather than unfavorable, the message is likely to be more effective. This is especially true when message processing is high rather than low (see Petty, Wegener, Priester, Fabrigar & Cacioppo, 1993).

Self-Validation

Thoughts in response to a message are referred to as primary cognitions. Much research over the last 40 years has incorporated these primary cognitions, but more recent work has also examined secondary cognitions under the rubric of metacognition (see Petty, Briñol, Tormala, and Wegener (2007) for an overview of metacognition research in social psychology).

Metacognition is the idea of thinking about one's own thoughts. Petty et al. (2002) were the first to investigate thought confidence, a form of metacognition, and its influence on persuasion.

Thought confidence refers to how much certainty or confidence an individual has in the thoughts produced about an attitude object. This research introduced the self-validation hypothesis. This hypothesis states that when people have more confidence in the validity of their thoughts, the thoughts will exert greater influence on related attitudes. In contrast, thoughts perceived as relatively invalid have less impact on attitude formation or change. Thought favorability is also

relevant to this conversation regarding self-validation. If the relevant thoughts are favorable, more confidence in their validity should increase persuasion whereas doubt should decrease persuasion. For unfavorable thoughts, increased doubt would produce more persuasion, whereas increased confidence would decrease persuasion. The research by Petty et al. (2002) found support for the self-validation hypothesis across four studies. They also importantly found that the factors that increase confidence in thoughts tend to influence thought confidence more when processing is high. Levels of processing can be shifted using various mechanisms, like by manipulating cognitive load (where reducing load can allow for high levels of processing) or personal relevance. Additionally, taking advantage of individual differences in need for cognition can be used. Those who are high in need for cognition like to think a lot, which leads them to process at a higher level (Cacioppo & Petty, 1982). The effects of high vs. low need for cognition on the processes at play in the formation of new attitudes have been looked at numerous times, like in Haugtvedt, Petty, and Cacioppo (1992).

There have been numerous ways of investigating different validating factors that can influence the relative confidence or doubt a person holds about attitude objects. Nodding or shaking of the head affects confidence by validating or invalidating the thoughts. In other words, it signals approval or disapproval to one's own thoughts (Briñol & Petty, 2003). It doesn't influence the direction of thoughts. Nodding one's head, as opposed to shaking the head, increased persuasion when a strong argument was read. However, when weak arguments were read, there was increased persuasion for those who shook their head as opposed to nodding. This same research also explored the effects of writing with one's dominant vs. non-dominant hand on confidence and self-esteem (attitudes about oneself). When using the dominant hand, self-relevant thoughts had a greater impact on self-esteem as compared to using the non-dominant

hand. The use of the dominant hand influenced the perceived validity of one's own thoughts, which went on to impact attitudes to a greater extent. Another paper explored the effects of body posture in the context of self-validation, and found that sitting up straight in a more confident position produced greater confidence and also more favorable self-evaluations (Briñol, Petty & Wagner, 2009). Additionally, level of power in recipients was explored in the context of persuasion to see if there were different effects depending on when power was induced. Power was manipulated in these experiments. Briñol, Petty, Valle, Rucker, and Becerra (2007) found that high power roles produce more confidence (and then mediate influence on attitudes) only when power is manipulated after a persuasive message.

A major validating factor investigated in self-validation literature, which applies to the context of the current research, is source credibility. Briñol, Petty, and Tormala (2004) investigated the relation between thought confidence and source credibility, focusing in their first study on examining natural variations in thought confidence and the extent to which confidence affected persuasion. They manipulated argument quality (which helps to influence valence of thoughts, with strong arguments predicted to produce more favorable thoughts) and had people list their thoughts after reading the message. The results from this study found that the self-validation hypothesis was upheld, in that for high need for cognition participants, reading strong arguments produced more favorable thoughts about the persuasive ad. The thoughts that were held with more confidence were used to a greater extent, and since these thoughts were favorable, more favorable attitudes toward the object were found. For low need for cognition, these results did not occur. The second study manipulated thought confidence by giving source credibility information after the message was read, and found similar results to the first study. Additionally, they found that when participants learn that source credibility was high, their

thoughts were held with greater confidence than if the credibility was low. From this research, a new way of thinking about source credibility information in the context of persuasion emerged, producing persuasion effects via thought confidence. Because of the effects of thought confidence, it is also plausible that high source credibility may lead to decreased persuasion if the thoughts are negative (which might occur when reading weak arguments), which is what Tormala, Briñol, and Petty (2006) found in their research. A study by Tormala, Briñol, and Petty (2007) investigated the timing of when source credibility information was delivered, because previous research had found that credibility can affect either thought favorability or thought confidence depending on the circumstances (under high elaboration conditions). The results indicated that thought confidence is influenced by source credibility when the credibility information is given after the persuasive message. If this information is given before the message is read, it can influence thought favorability. Under low processing conditions, source credibility can also affect attitude favorability without any necessary influences on the thoughts.

Content-Independent versus Content-Dependent Validation

The current research finds its base in a particular paper about types of self-validation (see Clark, Wegener, Sawicki, Petty & Briñol, 2013). They investigated whether self-validation effects change based on whether someone is focused on evaluating the source or the content of a persuasive message. When reading a persuasive message, one can use the content of the message to evaluate the position or object advocated in the message. Alternatively, one might use the facts given in the message to form an impression of the source of the message. The Clark et al. (2013) research pulled from the previous self-validation research discussed earlier, and examined settings that might change the pattern of thought confidence effects. When research participants encounter a confidence-instilling factor like source credibility after a message, the general

finding has been that confidence in one's thoughts increases regardless of the favorability (or unfavorability) of the thoughts (e.g. Tormala et al., 2007). Clark et al. (2013) referred to this pattern as content-independent validation because the content of the message does not influence the level of thought confidence in these studies.

To facilitate in the understanding of this content-independent validation, think about what would happen if a person read a strong persuasive message. They would likely form positive, favorable thoughts about the main object in the message. Then they find out the source is someone high in credibility. This person is assumed to provide the best available arguments and to be trustworthy. Thus, thoughts about the message presented by that source should be seen as more valid, which would make them more likely to be used to inform attitudes. Reading a weak argument and having negative thoughts will elicit these same effects on thought confidence because, if the highly credible person is providing the best available information, there must not be compelling evidence to support the issue or object and one can be confident in one's negative thoughts. However, if one were to read a strong argument, formed thoughts that were favorable about the message, and then found out the source was low in credibility, this would discredit their original thoughts, because the source cannot be trusted. They might not be providing reliable information. The source might also fail to state whether there are alternative positions or objects that might be better. Low source credibility also discredits negative thoughts elicited from the reading of weak arguments. Thus, the message reactions to the piece might be positive or negative, but once the source is lacking in credibility (i.e. expertise and trustworthiness), the thoughts about the message are invalidated.

However, Clark et al. (2013) suggested that a more specific type of validation, content-dependent validation, seems likely to occur in at least some settings. They proposed that one

thing that might produce this type of validation would be if a person were evaluating a persuasive message to form an impression of the source, rather than the message content. When reading a message to form an impression of the source, thoughts generated should be about the source. When information is later received about the source, this is used as a way to validate (or invalidate) thoughts. If thoughts about the source indicated the participant thought the source was credible, and the source information later revealed the source was indeed high in credibility, this would validate thoughts, increase thought confidence, and produce more favorable attitudes. When the given information about the source matches the initial hypothesized thoughts participants had, it provides converging support. However, if the source was initially perceived to be low in credibility (based on receipt of weak arguments), but is later revealed to be high in credibility, this mismatch causes doubt in the thoughts, and thus, attitudes form that are less consistent with the thoughts (i.e., more favorable than the initial negative thoughts would suggest).

There had not been any evidence of content-dependent validation in persuasion literature prior to the Clark et al. (2013) research, though in areas outside of persuasion there had been some work done that mimics similar patterns to what content-dependent validation would look like, where there was a match or a mismatch in characteristics (e.g. Clark, Wegener, Briñol, and Petty, 2009; Pyszczynski, LaPrelle, & Greenberg, 1988). The Clark et al. (2009) study investigated the relation between stereotypes and self-validation. They studied participants who received information on test scores from children and had to evaluate the child. After the test information, participants proceeded to listed thoughts about the child's performance, and received information about the SES of the child. Participants who received poor test performance information held their thoughts with more confidence (thus perceiving them as more valid),

when the child was found to be low in SES rather than high. The reverse was true for participants who received strong test performance information. They were more confident in their (positive) thoughts when they later learned that the child was high in SES rather than low. This was true when the participants could think highly and thoroughly about the performance (in a second experiment, participants were either under high or low cognitive load, and only those under low cognitive load, thus presumably able to process the information at a higher level, showed similar results consistent with self-validation). These findings align with the idea of content-dependent validation, though this term was not used in the Clark et al. (2009) article.

Clark et al. (2013) manipulated whether participants were asked to evaluate the source or the message, as well as argument quality and source credibility. Source credibility information was given after thought listings, and then participants completed post message attitudes and thought confidence measures, as well as some others. The idea, as stated before, was that during source evaluation, content-dependent validation would occur. These effects were expected to hold true with high need for cognition participants, and those that are motivated to process thoroughly (by making the message relevant).

The results provided evidence for the two types of validation. When participants evaluated the message, source credibility affected thought confidence, regardless of argument quality, and there was a spreading interaction between source credibility and argument quality on post-message attitude. That result paralleled previous self-validation studies (e.g. Tormala et al., 2007), and was consistent with content-independent validation. However, when evaluating the source, there was an interaction of source credibility and argument quality on thought confidence. Specifically, when the source was high in credibility, thought confidence was higher after encountering strong rather than weak arguments. When the source was presented with low

credibility, thought confidence was higher after encountering weak rather than strong arguments. Two main effects emerged for post message attitudes, such that higher credibility, as well as strong arguments, increased persuasion (leading to more favorable attitudes about the topic). These results were consistent with content-dependent validation.

Overview of Current Research

The current research set out to examine whether these different validation effects (both content-dependent and content-independent) could be replicated using less direct manipulations of evaluative focus. In other words, instead of directly instructing participants to evaluate the persuasive message for its content or for an impression of the source, more indirect manipulations were used. Indirect mechanisms of evaluation focus are important to look into because the results could generalize to a greater extent to processes happening in the real world, and not just the lab. It seems that there are situations in life that would lead a person to focus on forming an impression of either the source or the message, depending on the context (cf. Clark et al., 2013). For example, when there is an election looming in the near future, it would seem that citizens would be more likely to want to form an impression of the candidate and would use policy messages and any persuasive information they can get to form candidate impressions. However, if a person were already in office, citizens more likely would want to use policy information to evaluate the policy itself. Thus, specifically, the first study investigated whether content-dependent validation effects can be found from a “Before-Election” scenario and content-independent validation for an “After-Election” scenario. A second potential way to less directly change participants’ focus is to use a “mindset” priming task in which people practice evaluating people’s expertise or evaluating topics/issues prior to encountering the target

communication (without any specific instruction to form one type of impression or the other). Study 2 employs this “mindset” priming for the indirect evaluative focus manipulation.

STUDY 1

The primary aims of Study 1 were to examine the effects of indirect evaluative focus on thought confidence and to produce the content-independent and content-dependent validation effects found in the Clark et al. (2013) paper. A political scenario was created to guide the participants in evaluating the persuasive message either for an impression of the source (in the Before-Election condition) or the message content (in the After-Election condition), rather than giving direct instruction. Along with evaluative focus, argument quality and source credibility were also manipulated. As seen in the previous research, self-validation effects were most likely when participants think deeply about the persuasive article they are reading. To motivate participants, the message was delivered by a candidate/senator from Ohio (the state in which the participants live), and the message discussed a supposed local Ohio company that had been innovative in their development of phosphate-free detergents. The aspects of the source, message and location were made up for the purpose of the study.

Predictions for Study 1 were that “voters” for an upcoming election would be thinking in terms of forming an impression of the source of the message (i.e. the candidate). If so, they would list thoughts about the source more than those in the After-Election condition would. Upon learning information about the source (after the message), participants in the Before-Election mindset would have their thoughts validated or invalidated. If their initial impression of the candidate was that he is high in credibility (from strong arguments) and then they learn that he is indeed a credible source, their thoughts should be validated. Thus, thought confidence would be increased, and attitudes toward the source as well as toward the detergents (assuming

there are thoughts about those as well) would be more favorable. If they initially believe the source is credible, but the information presented after the message says the source is low in credibility, then their thoughts should be viewed as less valid, thought confidence would decrease, and less favorable attitudes should appear. The opposite would occur for weak arguments. Two main effects of argument quality and source credibility are expected for the post message attitude. These results would align with content-dependent validation.

When participants in Study 1 were asked to think like constituents of a senator in office (in the After-Election condition), they should be evaluating the policy message -- producing thoughts mostly about implications of the information for the product. After receiving information about the source, their thoughts should be validated or invalidated based on source credibility alone, regardless of argument quality (content-independent validation). In this case, there would be an interaction for source credibility and argument quality on post-message attitudes (see Clark et al., 2013). These effects are greatly dependent on how well the manipulations work to create the desired focus.

METHODS

Participants

Two hundred and six undergraduate students from introductory psychology courses at The Ohio State University were recruited to participate in this study via the Research Experience Program (REP) system. Students had to be at least 18 years of age to be eligible to participate in the experiment (as per the rules of the REP program). They received credit towards their class for participating. The study used a 2 (Evaluative Focus: Before Election vs. After Election) x 2 (Argument Quality: strong vs. weak) x 2 (Source Credibility: high vs. low) between-subjects design.

Procedure

This study took place in the lab, where the experiment was administered on computers using MediaLab 2012 software. After giving their informed consent, participants completed a pre-manipulation survey that contained mostly filler items with one measure about their attitudes towards phosphate-free detergents – the topic of the persuasive message they would later encounter during the study. Then, they were given instructions about the upcoming task. These instructions informed participants either that they were to imagine being a voter for an upcoming election and they would read a speech from a candidate (the Before-Election scenario) or that they were a citizen who was a constituent of a particular state senator and would be reading a speech from him (the After-Election scenario). Next, participants received the target message, consisting of arguments in favor of phosphate-free detergents, and then completed a thought-listing task in which they listed up to eight thoughts they had while reading the message. After the thought listing, source credibility information about the author of the message was given. Participants then went on to complete the measures of thought confidence (both individual and aggregate measures), post message attitudes, source credibility perceptions and perceptions of argument quality. After these measures were completed, participants received a debriefing that explained the purpose of the research and the methods used to study the questions of interest.

Independent Variables***Evaluative focus***

A political scenario was chosen to set up participants in the mindset of evaluating the persuasive message for either an impression of the source or the content. To manipulate whether the information was coming before or after an election, there were two versions of the instructions given prior to the target message being received. For the Before Election condition,

the participants received instructions that told them to imagine themselves as a voter in an upcoming election, where they are interested in evaluating any information they can get about candidates. The excerpt they read was from David Miller, a candidate for state senator, who is praising a local company for their innovation in phosphate-free detergents during one of his campaign stops.

In the After Election condition, participants were told to imagine themselves as a citizen in Ohio, where phosphate-free detergent usage is being considered in the state legislature. A state senator, David Miller, recently gave a speech about his views on these detergents because he would support their implementation (For full versions of these instructions, see Appendix B). In both scenarios, participants were asked to read the information closely and think carefully. By having this information provided prior to the target message received, it was plausible to believe that participants would either be using the message as a way to form an impression of the source (Before Election) or an impression of the message content (After Election).

Argument Quality

Participants received a pro phosphate-free detergent message set up as coming from a speech entitled “*Edmond Chemical Company and Phosphate-Free Detergents: A Win-Win for Everyone.*” David Miller gave the message, but no further information about the author was given until later. The message provided either strong or weak arguments that were revised from versions used in past research (see Tormala et al., 2006). They were revised to make the points fit with the use of the political scenario and to make the argument topics match in both the weak and strong version. Each message version consisted of arguments about the cost and savings, the effectiveness, and the consequences for the environment, but the weak version had more specious reasoning. For example, in the strong version, an argument could be “By buying

phosphate-free detergents, customers save 30%, which is a considerable savings. That can amount to dollars per load” or “Even more important, phosphate-free detergents pollute community groundwater significantly less than phosphate detergents”. In the weak version, those same points would be “By buying phosphate-free detergents, customers save as much as 1%. That might only be pennies per load...” or “Even more important, some people think that phosphate-free detergents may not pollute community groundwater as much as phosphate detergents.” (For full versions of the arguments used in this study, see Appendix A).

Source credibility

After reading the target persuasive message and completing a thought-listing task, participants received credibility information about the source (author) of the message.

In the high credibility condition, participants saw the following information:

Here is some additional information about this politician:
David Miller had a pre-political career as a distinguished professor of chemistry and biochemistry at a top-ten university in the United States. He has also served on a national task force examining the environmental and economic consequences of "cutting edge" consumer products.

In the low credibility condition, the following information was given:

Here is some additional information about this politician:
David Miller was an assistant professor in the field of English prior to his political career, but has no prior experience with the environmental or economic implications of consumer products.

The credibility information given acted as the validation factor, which was supposed to influence the level of confidence or doubt participants felt about the thoughts they had during the reading of the target persuasive message.

Dependent Measures

Pre- Manipulation Survey

The first task for participants was a 15-item survey that contained opinion measures about various topics, like capital punishment, nuclear power, scholarships for minorities, etc. Each question was rated on a 9-point scale. The fourth question shown was “The use of phosphate free detergents would be (*1 bad- 9 good*). This item was a pre-message attitude measure, which was the target of this survey, while the other items were used make it seem like it had no relation to the next part of the study.

Thought Listing

After receiving the target message, but before the source credibility information was shown, participants completed a thought-listing activity. They were told to type only one thought per box provided, and to not worry about grammar or writing complete sentences. They were also told the task was timed for three minutes, though this was just to make sure the participants didn't spend a lengthy amount of time coming up with these thoughts. It was supposed to be the thoughts that already come to mind when receiving the message, not something to deliberate on during the thought listing per se. These were later used in the thought confidence measures, as well as coded for source vs. message thoughts, and favorability (positive, negative or neutral).

Thought Confidence

After the source credibility information was seen, thought confidence measures were introduced with a transition of “We would now like you to think back to the thoughts you listed earlier and rate them on several dimensions.”

Participants completed two types of measures related to thought confidence. The first were ratings of the amount of confidence they had in the individual thoughts they listed. The thought they wrote appeared on the screen, and then they were asked, “How much confidence do you have in this thought you provided?” which they answered on a 9 point scale (*none at all –*

very much). After rating the individual thoughts, participants completed three 9 point scale items about the confidence in their thoughts overall. One question was “Overall, how much CERTAINTY do you have in the thoughts you listed?” (*none at all – very much*). The next asked about validity, and was “Overall, how VALID would you say your thoughts are?” (*not at all valid– extremely valid*). Lastly, they were asked “How certain are you that of all the possible thoughts that one might have, your thoughts generally reflect the 'right' way to think and feel about what you saw? (*Not at all certain- very certain*). Similar results were obtained when using each type of measure, so an overall thought confidence mean was produced that included both the rating values and the aggregate confidence values ($\alpha = .902$).

Post-Message Attitudes

After completing the thought confidence measures, participants were assessed on seven 9- point scale post-message attitude measures about phosphate-free detergents. The first five each had the stem, “Phosphate-free detergents are:” and then the following scale anchor pairs of bad-good, harmful-beneficial, useless-useful, foolish-wise, unnecessary-necessary. The last two were two 9-point scale measures that stated “Phosphate-free detergents, I:” (disapprove-approve) and “Phosphate-free detergents, I am:” (opposed – definitely in favor). The responses to these items showed high reliability ($\alpha = .951$) and thus were summed together to get a composite score.

Perceptions of Source (Source Credibility Manipulation Check)

Following the post-message attitude measures, participants completed source perception checks, which measured how participants perceived the source both in terms of expertise and their overall impressions of David Miller as a candidate or senator. Two 9-point scale items had the stem “To what extent is David Miller a CREDIBLE [EXPERT] source on the issue of phosphate-free detergent use?” (not at all- very much). The last two 9-point measures were the

following: “Overall, how good of a [candidate or senator] do you think David Miller is?” (not good– very much) and “To what extent is David Miller a high quality [candidate or senator]?” (very low quality –very high quality). Both types of measures were found to be reliable so an overall perceptions of source measure (including all four questions) was made, and it was reliable ($\alpha = .856$).

Argument Quality Manipulation Check

After rating the perceptions of source credibility, participants completed two measures to assess the quality of the reasons David Miller gave in favor of phosphate-free detergents. These served as checks for the argument quality manipulation, to verify the difference between strong and weak arguments. Two 9-point scale questions were asked: “How strong were the reasons [Candidate/Senator] Miller gave to support phosphate-free detergents?” (not at all strong-very strong), and “How compelling were the reasons [Candidate/Senator] Miller gave?” (very poor reasons- very good reasons). Responses were reliable ($\alpha = .873$) and thus averaged together to get a single score for each participant.

Relevant to Ohio questions

Since the target message was constructed as a speech given about a local Ohio company, we wanted to ask a few questions about the participants’ relationship to Ohio and elections here in the state. These measures were given after the argument quality manipulation checks. Two yes/no questions were asked: “Have you ever voted in a state of Ohio election?” “Do you consider the state of Ohio home?” as well as one fill in the blank: “How long have you lived in Ohio?”

RESULTS

Evaluative Focus Check

The proportion of thoughts about the source was calculated (for each evaluative focus condition) as the total number of source thoughts divided by the total number of thoughts. A 2(Evaluative Focus) X 2(Argument Quality) X 2(Source Credibility) Analysis of Variance (ANOVA) was run to test the manipulation of Evaluative Focus. As expected, a main effect of Evaluative Focus emerged ($F(1,187) = 4.11, p = .044$), where participants produced a greater proportion of source thoughts in the Before Election condition ($M = .207, SE = .029$) than in the After Election condition ($M = .126, SE = .028$). Unexpectedly, a significant argument quality main effect appeared ($F(1, 187) = 4.49, p = .036$), where strong arguments produced a higher proportion of source thoughts ($M = .209, SE = .028$) than weak arguments ($M = .124, SE = .028$).

Argument Quality Check

The perceived strength of arguments was submitted to an Analysis of Covariance (ANCOVA). A pre-message attitude item about phosphate-free detergents was included as the covariate, along with the same Evaluative Focus, Argument Quality, and Source Credibility factors as in the evaluative focus check. The expected argument quality main effect was found ($F(1,186) = 12.65, p < .0001$), where those participants who received strong arguments viewed them as more compelling ($M_{adj} = 6.75, SE = .15$) than the participants who received weak arguments ($M_{adj} = 5.98, SE = .15$). A main effect of source credibility also emerged ($F(1,186) = 13.42, p < .0001$). Participants who received the message from a high-credibility source perceived the arguments as more compelling ($M_{adj} = 6.76, SE = .16$) than those who received the message from a low-credibility source ($M_{adj} = 5.97, SE = .15$). Lastly, the covariate of pre-message attitude was also significant ($F(1,186) = 13.36, p < .0001$). The pre-message attitude item positively predicted the extent to which strong arguments were seen as more compelling.

Source Credibility Check

The composite scores of perceived source credibility were submitted to the same three-way ANCOVA as above. The analysis revealed the expected main effect of the source manipulation ($F(1,186) = 154.11, p < .0001$). Participants rated the source as more credible when they were in the high- ($M_{\text{adj}} = 6.38, SE = .176$) rather than low-credibility condition ($M_{\text{adj}} = 3.34, SE = 1.70$). The pre-message attitude item was used as the covariate and was significant ($F(1,186) = 8.43, p = .004$). More favorable pre-message attitudes were related to perceptions of the source as being more credible. An argument quality main effect was also significant ($F(1,186) = 4.93, p = .028$), where strong arguments produced perceptions of higher credibility ($M_{\text{adj}} = 5.13, SE = .172$) compared to weak arguments ($M_{\text{adj}} = 4.59, SE = .174$). An unexpected result was an evaluative focus main effect ($F(1,186) = 8.27, p = .004$). Participants in the After Election condition viewed the source as more credible ($M_{\text{adj}} = 5.22, SE = .171$) than those in the Before Election condition ($M_{\text{adj}} = 4.51, SE = .176$).

Thought Confidence

The combined thought confidence scores (individual ratings and overall measures together) were submitted to a three-way between-subjects ANOVA. The predicted interaction of Evaluative Focus x Argument Quality x Source Credibility was not significant ($F = 1.23, p = .256$). There was a marginally significant overall main effect of source credibility ($F(1,187) = 3.50, p = .063$), such that a higher expertise source tended to lead to more thought confidence ($M = 6.89, SE = .16$) than a lower expertise source ($M = 6.47, SE = .16$). There was also an overall significant Evaluative Focus x Source Credibility interaction ($F(1, 187) = 3.94, p = .049$). As shown in Figures 1 and 2, the After Election (Message Focus) seemed to generally follow the predicted pattern of content-independent validation. The simple effects of source credibility showed that high source credibility led to more thought confidence ($M = 7.18, SE = .20$) than

low credibility ($M = 6.31$, $SE = .19$) in the After Election condition ($F(1, 96) = 10.14$, $p = .002$), but not in the Before Election condition ($F < 1$). Also, the source effect in the After Election condition was unmoderated by the quality of arguments in the message ($F < 1$), which is consistent. We would expect a lack of an argument quality main effect in the After Election condition. However, the Before Election did not produce the desired pattern of content-dependent validation. That is, there was no Argument Quality X Source Credibility interaction ($F < 1$). Instead, there was just a non-significant tendency for strong arguments to lead to more thought confidence than weak arguments, ($F(1,91) = 2.58$, $p = .112$).

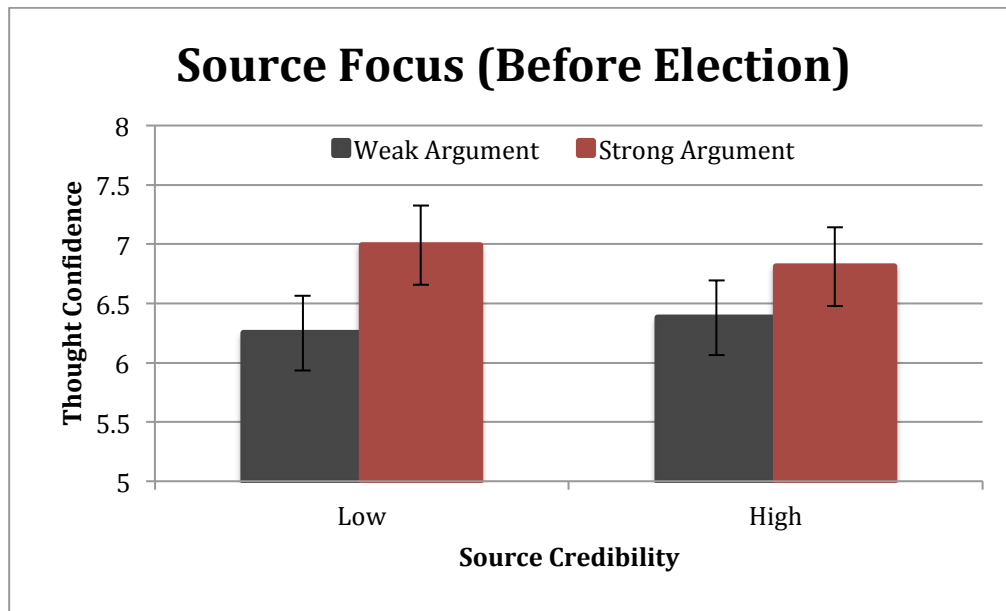


Fig. 1 Thought Confidence as a Function of Argument Quality and Source Credibility in Before Election Condition

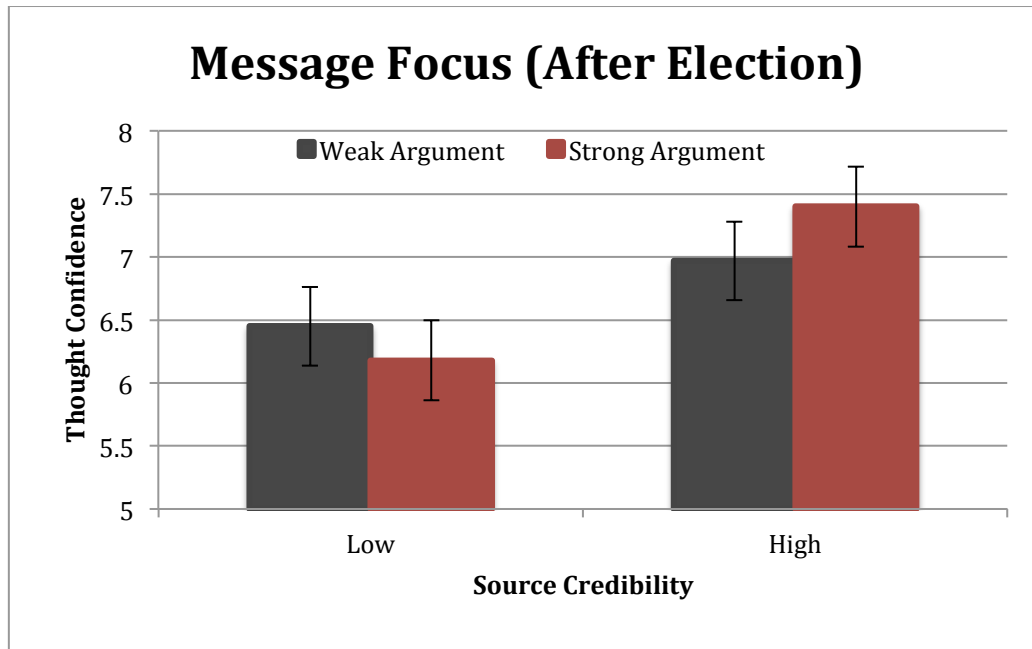


Fig. 2 Thought Confidence as a Function of Argument Quality and Source Credibility in After Election Condition

Post-Message Attitude

A three-way ANCOVA was run for post-message attitude, with factors of Evaluative Focus, Argument Quality, and Source Credibility, and pre-message attitude as a covariate. Post-message attitude was used to gauge how persuasive the target message was for participants. The predicted three-way interaction was not significant ($F < 1$). Figures 3 and 4 show the adjusted means of post-message attitudes for both the Before Election and After Election conditions. The pre-message attitude covariate had a mean of 6.19, and produced a significant effect ($F(1, 186) = 74.87, p < .0001$). Thus, there was a strong relation between pre-message and post-message attitudes. In addition, a main effect for argument quality emerged ($F(1, 186) = 4.95, p = .027$), such that stronger arguments were more persuasive ($M_{adj} = 7.00, SE = 0.12$) than weak arguments ($M_{adj} = 6.61, SE = 0.124$). In other words, more favorable attitudes about phosphate-free detergents were produced with stronger arguments. The pattern of thought confidence data for the Before

Election condition fits in a way with this result, more confidence in favorable thoughts could lead to more favorable attitudes. However, the thought confidence pattern for the After Election condition would have suggested an Argument Quality X Source Credibility effect on post-message attitudes that did not appear. Both Figures 3 and 4 also show a small amount of spreading from argument quality in the high credibility condition, which is somewhat consistent with content-independent validation, but again, this was not significant.

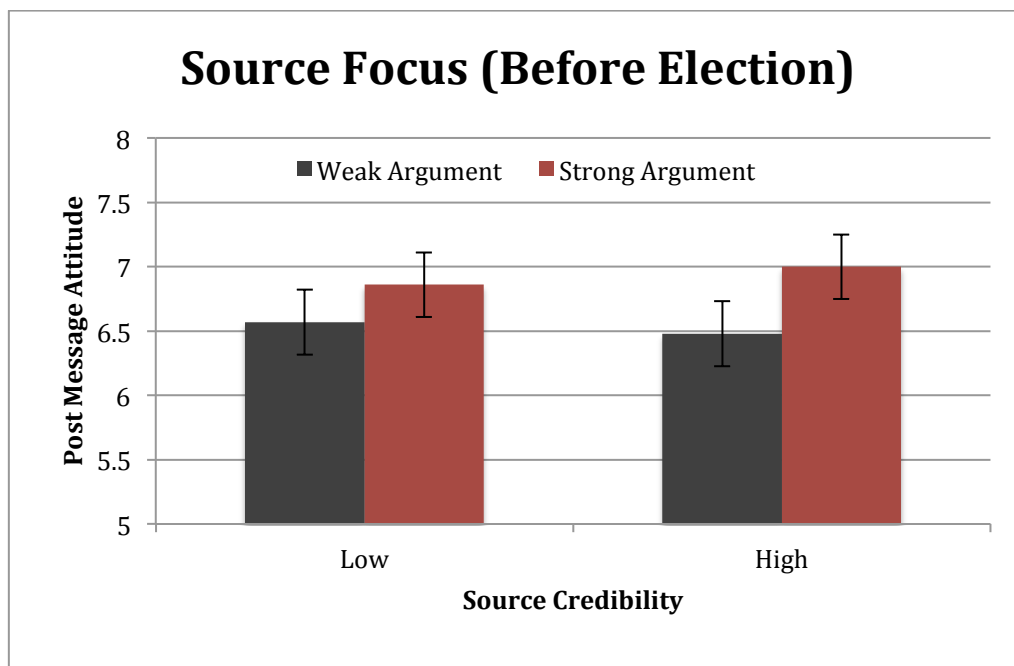


Fig. 3 Post Message Attitude as a Function of Argument Quality and Source Credibility in the Before Election Condition

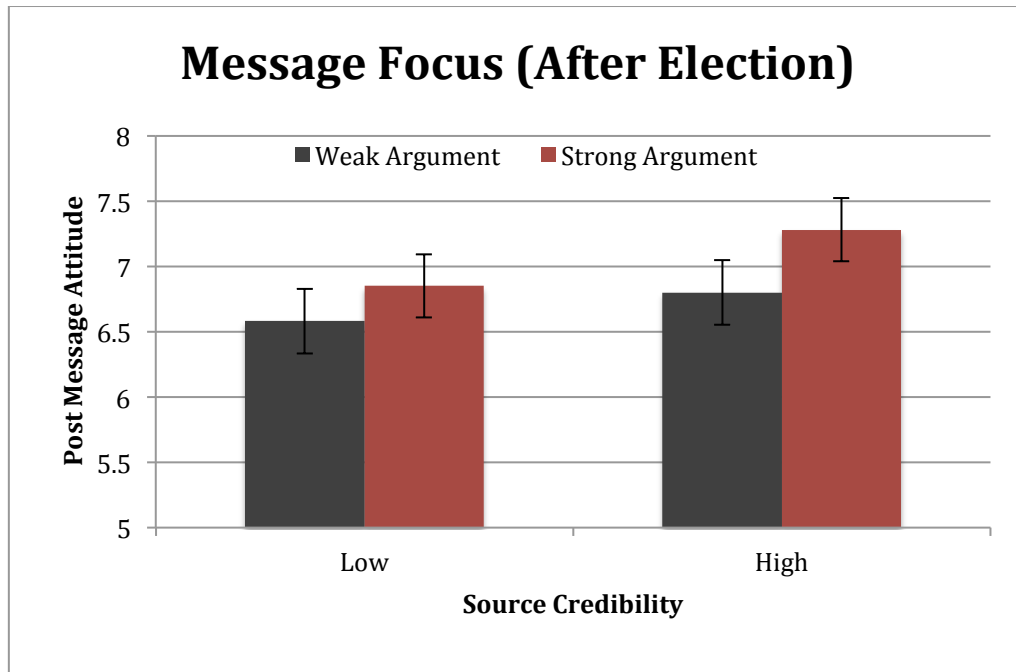


Fig. 4 Post Message Attitude as a Function of Argument Quality and Source Credibility in the After Election Condition

STUDY 1 DISCUSSION

Study 1 provided some evidence that content-independent validation could be produced more indirectly than in the Clark et al. (2013) research (though studies previous to Clark et al., 2013, that demonstrated content-independent validation also did not explicitly instruct research participants to focus on evaluating the message). Though the predicted three-way interactions from the Clark et al. (2013) paper did not emerge with any significance, there were trends in the expected direction when focusing on evaluation of the message (i.e., the After Election condition). In addition, we saw that overall, our source credibility and argument quality manipulations were reasonable.

After reviewing our manipulations for strong and weak arguments, we realized that the distinctions could have been clearer, so these were edited in Study 2. The weak arguments did not seem to be weak enough, because the judged persuasiveness of the weak arguments was still

quite high. We would have liked to see more negative thoughts in order to have (in)validation of those thoughts by a low-expertise source. In addition, we would have liked to see more thoughts about the source produced in conditions aimed at focusing people on source evaluation, even though the evaluative focus manipulation did create significant differences in the proportion of source thoughts. Though the results showed some trends in the direction of content-independent validation when evaluating a speech given by a seated official (intended to focus people on message evaluation), we wanted to see both types of validation occurring in one study. In order to try and improve an indirect source focus mindset to get evidence for content-dependent validation (in addition to evidence for content-independent validation), I developed an alternative method to indirectly produce a source versus message focus. That is, in Study 2, I created a way to “prime” a source focus or message focus mindset by having participants complete a series of person- or topic-related judgments. Because a pre-message attitude measure would only fit with the topic-focus condition and not with the person-focus condition, no pre-message attitude measure was used in Study 2.

STUDY 2

Study 2 tested similar predictions for content-independent and content-dependent validation but utilized a different way of attempting to indirectly focus participants on either the source or the message. The participants either answered a series of person (expertise) judgments with questions like, “To what extent is LeBron James an expert on coaching basketball?” or a series of judgments of topics or policies, such as, “To what extent are there good reasons to implement mandatory recycling?” After these judgments, the target message appeared without additional instructions so it might naturally be treated as another example of information about a person or about an issue that was to be evaluated. The strong argument manipulation and source

credibility manipulations were the same as in Study 1, with the exception that the source was not specifically from Ohio (because the data were collected online from participants that could live anywhere within the United States).

METHODS

Participants

Two hundred and thirty-nine participants that reside in the U.S. were recruited through Amazon's Mechanical Turk online system. Participants in this study were paid after completing it. The two hundred and thirty-nine individuals passed our attention check. The total number of participants was 254, but fifteen participants were removed because they didn't pass the attention check. This study again used a 2 (evaluative scenario: person or message judgment tasks) x 2 (argument quality: strong vs. weak) x 2 (source credibility: high vs. low design).

Procedure

This study took place online via a Qualtrics survey. After giving their informed consent, participants received instructions that asked them to complete a series of judgments. These either involved (1) questions that asked participants to judge the expertise of a particular person/source of a brief message, or (2) questions that asked for the participants' opinions on different topics. After some of the questions, participants were asked to list one or more thoughts they had while reading the information. The judgment tasks were designed to put participants in the mindset of using the available information to either evaluate a person or a topic with the hope that the target message would then also be approached with the same evaluative mindset. The last item in the respective "judgment task" was actually the target message, consisting of pro phosphate-free detergent arguments. Though the participants were not immediately asked about expertise or their opinion on the message (like in the prior judgments), they did complete a thought-listing

task, in which they listed up to six thoughts they had while reading the message. After the thought listing, source credibility information about the author of the message was given. They then went on to complete the measures of thought confidence, post message attitudes, and perceptions of the argument and the credibility of the source. After the dependent measures were complete, a debriefing was given to the participants. After the debriefing, participants were asked to report their Mechanical Turk worker ID number and to create a unique six-digit survey code to list on the survey and use in the Mechanical Turk payment system. The unique code ensured that people actually had to go through and take the survey in order to be paid for their participation.

Independent Variables

Evaluative focus

The first part of the experiment asked participants to complete a series of judgments as a way to get them into the mindset of either evaluating expertise or topics. By having participants either complete all person or all message/topic judgments, they should be in this mode of evaluation when they encountered the target message (the last “judgment task” they saw). Thus, though I never explicitly asked participants to focus on evaluating the source or content of the target message, I assumed that they would treat it the same as they treated the previous judgments. The instructions did not mention what type of judgment task (person or message) they would be doing to try to minimize the direct instruction of evaluative focus. There were variations in the way these tasks looked in each condition. Some of the judgments were presented as a question, like this example from the person judgment condition: “To what extent do you think Michael Jordan is likely to be an expert on coaching basketball?” with a 9 point scale (*not an expert -very expert*). Other judgments had a description prior to the question that varied in length from a few sentences to multiple paragraphs. These questions also had thought

listings as part of them. An example of this type from the message (topic) judgment condition follows:

The idea of implementing a junk food tax arose from research on the costs of eating junk food. Some research has found that Americans receive nearly one-third of their calories from junk food, and has also found connections where people whose diets are high in junk foods showed an increased risk for diseases like diabetes. Implementing a tax would discourage the consumption of junk food, hopefully leading to reduction of the diseases.

How reasonable would it be to implement a junk food tax? (1 not at all reasonable- 9 very reasonable)

Please list one thought you had while reading this.

The reason for the variations in style was to better assimilate the target message in as a reasonable statement that could be seen as part of these tasks. The target message was multiple paragraphs long, so having a variety of types of items among the judgments should help participants to perceive the target item as simply being part of the ongoing task. The short and long items were mixed up so there was variability in item formats and lengths across the series of judgments. For the complete versions of these activities, see Appendix C.

Argument quality

The target message that participants saw did not have a title like the argument message did in Study 1, because it was supposed to look like part of the previous judgment task. The message also did not have the portion that related to David Miller being a candidate or a senator. Rather, this portion was replaced by an introduction of David Miller as a member of the local Chamber of Commerce. A Chamber of Commerce member could likely still have the qualifications of the credibility information given in Study 1. Because this was run with Mechanical Turk participants, no state was specified. David Miller was just described as a local

official. Making a message relevant has been shown in past research to increase the level of processing. To get self-validation effects, participants need to be at a higher level of processing when reading the message. The strong argument condition that participants received was very similar to the one described in Study 1. The weak argument condition was revised and resembled the version used in the Tormala et al. (2006) research, with some differences. After a pilot run of Study 2, the weak message version used in Study 1 was not producing enough negative thoughts from participants, and was still viewed as rather persuasive. We thought this might have been because the differences were too subtle. Thus, in the weak argument condition of Study 2, packaging aesthetic and weight, money savings, and smell of the detergents were discussed, so an argument could be something like, “the packaging of most phosphate-free detergents is more attractive than that of other kinds of detergents. This is partly because of the colorful designs...” (for the full version of the weak argument message, see Appendix A).

Source credibility

Following the thought-listing task, but prior to thought confidence measures, participants received credibility information about the author (source) of the message. The low and high credibility information was the same as in Study 1, except that the phrase “Prior to his political career” was omitted.

Dependent Measures

Thought Listing

After reading the target message, participants were asked to write thoughts they had while reading the chamber of commerce member’s speech on phosphate-free detergents. There were six blanks provided, and they were told that a phrase would be sufficient as long as the basic meaning of each thought was conveyed.

Thought Confidence

In Study 1, the ratings of individual thoughts and the rated confidence of thoughts in general produced similar results, so the current study only used measures that asked about overall thought confidence. Participants were given three 9-point items similar to the ones in Study 1, with questions “Overall, how much [Confidence, Certainty] do you have in the thoughts you listed?” with anchor points of *none at all- very much*. The last question was “Overall how valid would you say your thoughts are?” (*not at all valid – extremely valid*). The responses on these scales were reliable ($\alpha = .897$) and summed to produce a composite score.

Post-Message Attitudes

Post-message attitude and source perception measures were counterbalanced between subjects, to enable me to examine whether there were order effects in the answering the source versus topic questions following the target information. The attitude measures were similar to the ones used in Study 1, except only four 9-point scales were used. The first three had the stem “Phosphate-free detergents are:” with anchor pairings of *bad- good*, *harmful-beneficial*, and *unnecessary-necessary*. The fourth question was “Phosphate-free detergents. I am...” with end points of *definitely opposed to definitely in favor*. Taken together, these measures were reliable ($\alpha = 0.91$), and a composite score was used in the analyses.

Perceptions of Source

Participants completed measures of source perception aimed at assessing how participants viewed the expertise of the source. These questions served as a manipulation check for the source credibility manipulation, as in Study 1. There were two credibility questions used, similar to the first two in Study 1, but the name David Miller was used instead of specifying

“candidate” or “senator.” These two questions were reliable ($\alpha = .95$), so a composite score was produced.

Attention Check

To see whether participants had been paying attention in the experiment, we created an attention check measure that was presented after the source perception and post message attitude questions. The following was given: “We have been asking about David Miller and phosphate-free detergents in the last few questions. If you are paying attention, please select option three.”

Argument quality manipulation check

After rating the perceptions of source credibility, post-message attitudes, and the attention check, participants completed two measures to assess the manipulation of argument quality. These were the same ones used in Study 1, except the name David Miller took the place of “candidate” or “senator”. Responses were reliable ($\alpha = .981$) and thus averaged together to get a single score for each participant.

Thought Ratings

In Study 2, participants were asked to rate their own thoughts on the dimensions of valence (i.e. positivity or negativity) and content (i.e. source or message). This was different from Study 1, where they did not rate their own thoughts. In addition, participants were asked to select the “no thought listed” option if they did not write a thought. The computer listed thoughts in the sequence in which participants had initially listed them, and participants rated the thought as positive, negative, neutral or no thought. They also rated the thought as being about the source, message, neither or no thought.

STUDY 2 RESULTS

Evaluative Focus Check

The proportion of source thoughts that each participant listed was submitted to a three way between subjects ANOVA. The expected evaluative focus main effect was found ($F(1,231) = 9.62, p = .002$), where those in the Person Judgment condition produced a larger proportion of source thoughts ($M = .166, SE = .024$) than those in the Message Judgment conditions ($M = .0633, SE = .02$). Interestingly, a significant argument quality x source credibility interaction also appeared ($F(1,231) = 4.51, p = .035$). Looking at simple effects for this interaction, argument quality showed a main effect in the low-credibility condition ($F(1,231) = 5.19, p = .024$), where those who received strong arguments produced a greater proportion of source thoughts ($M = .152, SE = .03$) than those who received weak arguments ($M = .045, SE = .03$). However, this difference was not present in the high-credibility condition ($F < 1$).

Argument Quality Manipulation Check

The perceptions of strength of arguments were submitted to a three-way ANOVA to check the manipulation of argument quality. The predicted main effect of argument quality was significant ($F(1,227) = 75.23, p < .0001$), in which those participants who received strong arguments perceived the arguments as stronger and more compelling ($M = 7.57, SE = .21$) than those in the weak argument condition ($M = 5.02, SE = .21$). A significant main effect for source credibility was also found ($F(1,227) = 3.92, p = .049$). Participants in the high credibility condition perceived the arguments as stronger and more compelling ($M = 6.60, SE = 0.21$) than participants in the low credibility condition ($M = 6.00, SE = .21$).

Source Credibility Check

The composite of perceptions of source credibility was submitted to a three-way ANOVA. As anticipated, a significant main effect of the source credibility manipulation was

found ($F(1, 228) = 180.94, p < .0001$), where participants in the high credibility condition rated a source as having higher expertise and credibility ($M = 6.86, SE = .19$) than participants in the low credibility condition ($M = 3.26, SE = .19$). A significant argument quality main effect emerged as well ($F(1, 228) = 9.78, p = .002$). Participants who received strong arguments perceived the source as more credible ($M = 5.48, SE = 0.19$) than those who received weak arguments ($M = 4.64, SE = 0.19$).

Thought Confidence

After summing the scores of the various confidence measures to make an average index for each participant, thought confidence scores were submitted to a three-way ANOVA. The predicted Evaluative Focus x Argument Quality x Source Credibility interaction did not emerge as significant ($F(1, 230) = 1.54, p = .22$). Looking at Figures 5 and 6, a trend appeared in the correct direction (particularly in the low credibility condition) for content-dependent validation within the Person Judgment condition. That is, it looks like there is higher confidence when strong arguments are followed by high source expertise vs. low expertise, but a slight tendency for weak arguments to produce higher confidence when followed by a non-expert rather than expert source. However, the AQ x SC interaction was not significant ($F(1, 111) = 1.74, p = .19$). There was a marginally significant AQ main effect ($F(1, 111) = 3.84, p = .053$), but in this case, weak arguments produced slightly higher thought confidence. In the Topic Judgment condition, there was not even a weak tendency for Source Credibility to influence thought confidence ($F < 1$). There was a significant overall Argument Quality X Evaluative Focus interaction ($F(1, 230) = 4.06, p = .045$). Argument quality had a significant effect on thought confidence in the Person Judgment condition ($F(1, 230) = 5.044, p = .026$), but did not affect thought confidence in the Message Judgment condition ($F < 1$). In addition, there was a marginally significant main

effect of Evaluative Focus ($F(1, 230) = 3.46, p = .064$) in which the Message (Topic) Judgment condition led to more thought confidence ($M = 7.49, SE = .15$) than the Person Judgment condition ($M = 7.10, SE = .15$).

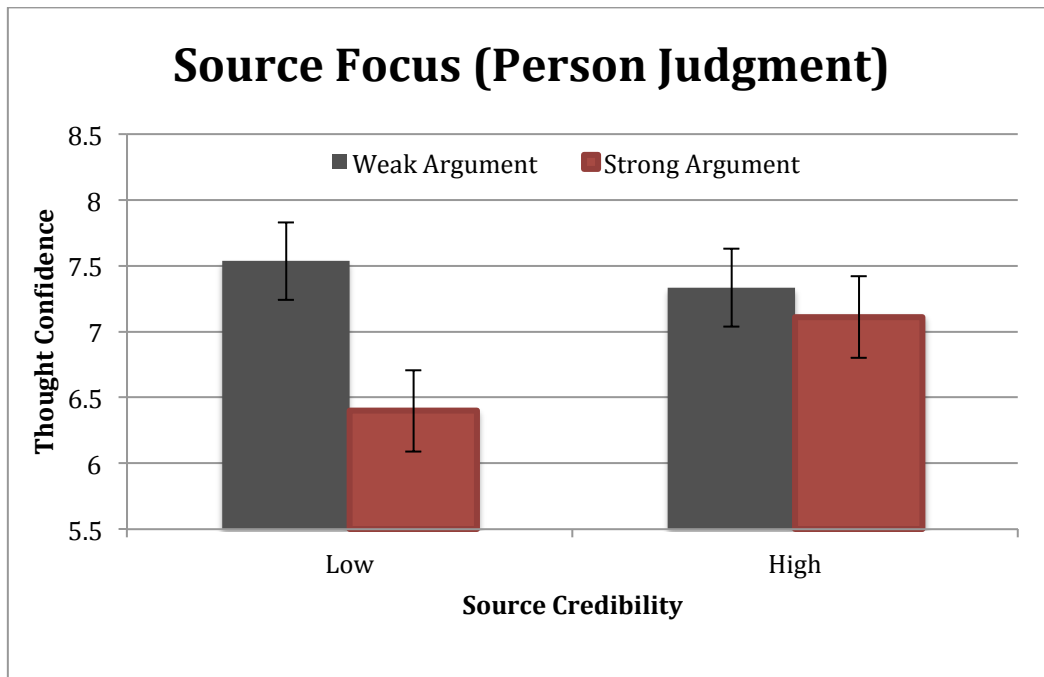


Fig. 5 Thought Confidence as a Function of Argument Quality and Source Credibility in Person Judgment Condition

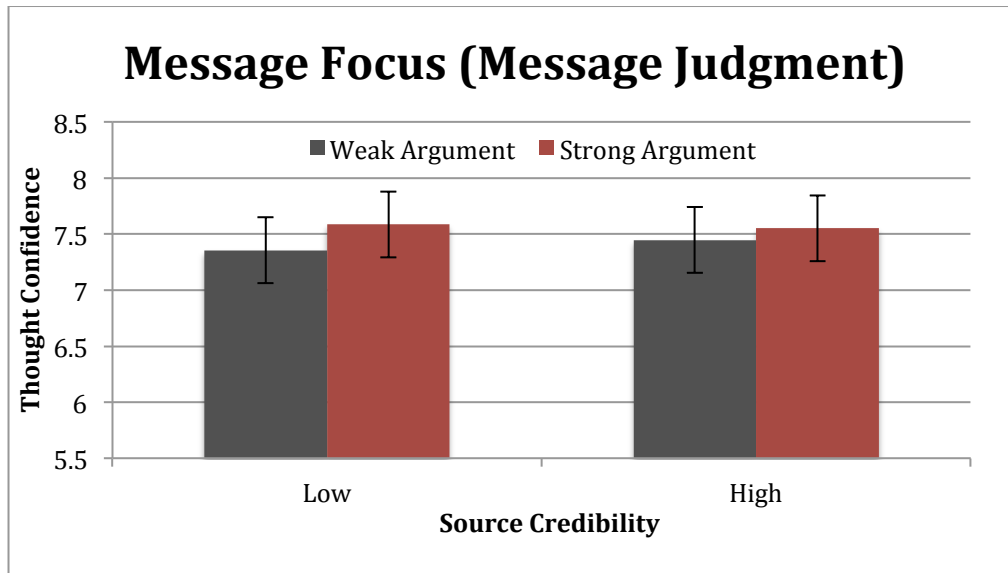


Fig. 6 Thought Confidence as a Function of Argument Quality and Source Credibility in Message Judgment Condition

Post-Message Attitude

A three-way ANOVA on Post-Message Attitude revealed an overall main effect of AQ ($F(1,230) = 17.41, p < .0001$) in which strong arguments were more persuasive ($M=7.44, SE = .15$) than weak arguments ($M=6.59, SE = .14$). There was also a marginally significant Evaluative Focus \times Argument Quality \times Source Credibility interaction ($F(1,230) = 3.37, p = .068$). Thus, the trending interaction seemed to be promising. Based on Figures 7 and 8, the Person Judgment condition presented patterns of results that mimic some of the predicted patterns. The data was split into Person and Topic judgment condition to tease apart the three-way interaction. In the Person Judgment condition, a significant main effect for Argument Quality emerged ($F(1, 111) = 5.94, p = .016$) where stronger arguments produced more favorable attitudes ($M=7.40, SE = .22$) than weak arguments ($M = 6.68, SE = .20$). There was a trend in the direction of a main effect of Source Credibility where higher expertise led to greater thought confidence, but it did not achieve significance ($F(1,111) = 2.32, p = .131$). The pattern was in the direction of both main

effects that would be produced by content-dependent validation, however, and the pattern also followed the results of thought confidence that emerged in the Person Judgment conditions.

In terms of the Message Judgment condition, however, the results look almost opposite of the predicted pattern. A main effect of argument quality was significant ($F(1, 111) = 12.19, p = .001$) where stronger arguments were more persuasive ($M = 7.49, SE = .20$) than weak arguments ($M = 6.51, SE = .20$). With no effect of source credibility on thought confidence and relatively high confidence overall, the main effect of argument quality in absence of an interaction with source credibility would make sense. However, there was also a minor trend toward an Argument Quality x Source Credibility interaction in which argument quality effects were stronger when followed by the low credibility rather than high credibility source (though this interaction pattern was not significant ($F(1, 119) = 2.38, p = .125$)).

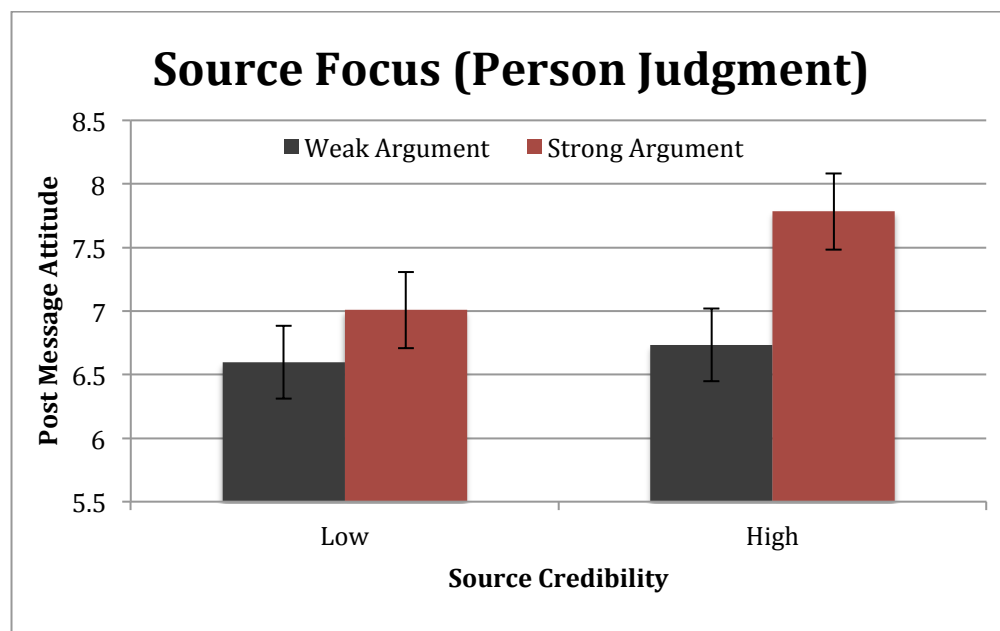


Fig. 7 Post Message Attitude as a Function of Argument Quality and Source Credibility in Person Judgment Condition

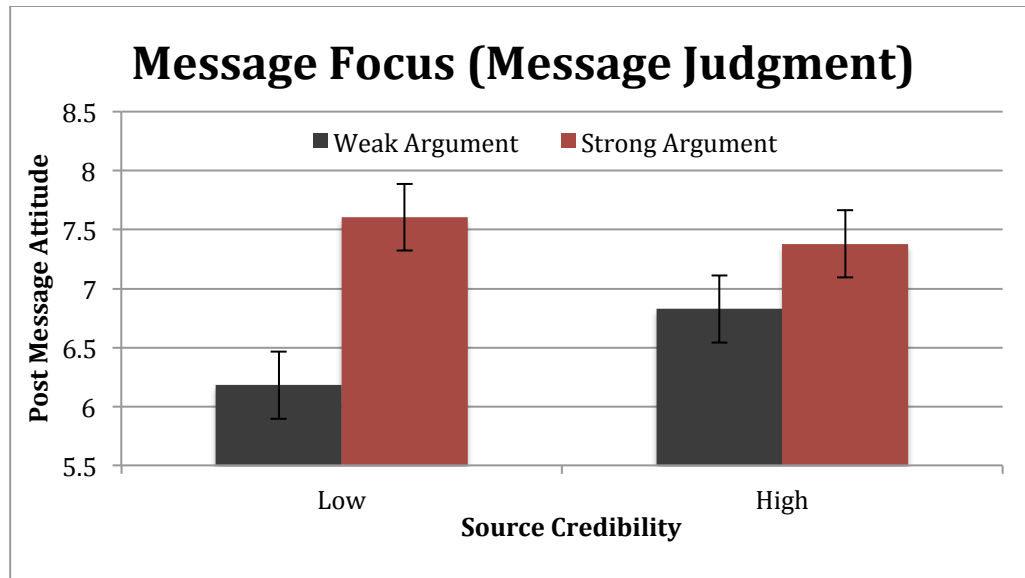


Fig. 8 Post Message Attitude as a Function of Argument Quality and Source Credibility in Message Judgment Condition

STUDY 2 DISCUSSION

Study 2 provided evidence that using an indirect manipulation of evaluative focus can produce a content-dependent validation pattern (in person judgment/source focus situations), but there was less evidence in for content-independent validation. Apparently, Study 2 did a better job of setting people in the mindset of evaluating a persuasive message for an impression of the source by using the judgment tasks. However, though the Evaluative Focus check came out significant, there was a smaller proportion of source thoughts in both the source and message focus conditions compared to Study 1, so it's a little unclear why content-dependent patterns emerged to a better extent. In Study 2, the weak and strong messages had clearer distinctions. One thing to note in Study 2 is that thought confidence was high across both Person and Message Judgment conditions and was higher than the thought confidence results in Clark et al (2013). This may be because the arguments were presented in a way that made processing easier in the current study, but it could also be that the current arguments were more extreme than in the

previous research (i.e. so strong or so weak that there was high confidence in the associated thoughts and the validating factor of source credibility could not achieve its full effect). Between subjects, the argument quality and source credibility manipulations worked as expected. But if people were really confident that the product was great or really bad, they may not have used the information of the expertise level of the source. In terms of post-message attitude, it is unclear why the Topic Judgment condition produced a pattern of results opposite of what much of the previous literature has found. The main effect of argument quality being the only significant effect in the Topic Judgment condition made sense in terms of the high levels of confidence across argument quality and source credibility in the Topic Judgment condition. However, the lack of source credibility effects on thought confidence provides no explanation for the tendency for larger argument quality effects in low rather than high credibility conditions.

GENERAL DISCUSSION

Taken together, the two studies provide some evidence for the production of content-independent and content-dependent validation effects when utilizing more indirect manipulations of evaluative focus. Though neither study produced evidence for both types occurring in the same study, there were some aspects of the results that fit with the previous research.

In Study 1, source credibility influenced thought confidence in the After Election (Message Focus) condition but not the Before Election (Source Focus) condition. That pattern was consistent with content-independent validation being more likely when focused on evaluating the message rather than evaluating the source. However, the content-dependent pattern of thought confidence depending on both argument quality and source credibility did not occur. Rather, consistent with thought confidence being rather high across all cells in the Before Election (Source Focus) condition, there was just a main effect of argument quality on the

favorability of post-message attitudes. Also, although thought confidence was influenced by source credibility in the After Election (Message Focus) conditions, there was not a significant Argument Quality X Source Credibility effect on post-message attitudes.

In some respects, Study 2 results were the mirror image of those in Study 1. Whereas Study 1 provided some patterns consistent with content-independent validation in message focus conditions but little evidence of content-dependent validation in source focus conditions, Study 2 provided some evidence of content-dependent validation and little of content-independent validation. That is, in Study 2, the pattern of thought confidence following Person Judgments was consistent with content-dependent validation. Thought confidence was higher following strong arguments when presented by a more credible source, but thought confidence was (weakly) higher following weak arguments when presented by a less credible source. Also, post-message attitudes showed tendencies toward both main effects of source credibility and argument quality, which would be consistent with content-dependent validation. In contrast, Study 2 only created high levels of thought confidence across both levels of source credibility following Message (Topic) Judgment tasks. Accordingly, post-message attitudes only showed influences of argument quality (but not the Argument Quality X Source Credibility interaction that would indicate content-independent validation). Overall, the patterns of post-message attitude in the Message (Topic) judgment condition were not consistent with the previous literature (assuming that condition successfully focused people on evaluating the message). However, given the thought confidence levels reported, the post-message attitude results generally fit with the most general self-validation principle of people being more affected by thoughts that are held with confidence.

Implications and Future Directions

Although the results of the current research did not replicate the exact patterns predicted from the previous research, self-validation effects still have numerous implications in various persuasion areas, especially in fields like business and politics. If the two types of self-validation can be replicated in one study that uses more indirect (naturalistic) manipulations for evaluative focus, this would have real benefit, so that companies for example know when to communicate the level of expertise of a source (i.e., before a message, which can influence processing of the message, or after a message, which can influence confidence in one's thoughts generated about the message). The knowledge of persuasion tactics helps people determine the likely processes at work, which have important implications for when a given attitude is likely to last, guide behavior, etc.

In the two studies of the current research, there were certainly some limitations. Arguably the biggest is the difficulty in assessing whether the indirect manipulations of source vs. message focus were actually getting people to focus as intended. In the Clark et al. (2013) research, they found a higher proportion of source thoughts than either of our studies ($M = .52$ in the source focus condition and $M = .23$ in the message focus). However, they used direct instructions, and thus had a better idea about whether the evaluative focus manipulation worked. Future work should look into ways of assessing indirect manipulations, particularly finding a better manipulation check for the evaluative focus condition. It might be possible to just ask participants if they thought about the source or the message content more while reading the message (though this would require the ability to recall back to that). Another limitation would be participants missing key parts of the evaluative focus or source credibility manipulations if they didn't read carefully enough. It is important to make these clear and (also relevant) so that people pay attention and process at a high level, as self-validation effects only emerge with high

levels of information processing (Petty et al., 2002). It might be helpful to find a better way to motivate people to think about the attitude object at a higher level. Additionally, the length of both the target message and study were quite long, which may have deterred people from reading carefully, so length is an important consideration. Finally, the use of politics in Study 1 was important for this research, as politics present natural contexts that can lend themselves to different types of focus (on candidates or policy). However, some people have skeptical views of politics, or may view politicians as biased and having ulterior motives related to the things that they talk about, which could get in the way of the aims of the study in some cases. The traits inferred about the candidate may rely too heavily on outside perceptions of how biased politicians are and not enough on using the information provided.

The concept of two types of validation (content-dependent and content-independent) is relatively new, and it may not be a bad idea for future work to replicate the results of Clark et al. (2013) with explicit directions to focus on source or content. Future studies may want to look into the use of different manipulations of thought confidence or validating factors, as well as different attitude objects. Recently, Clark and Thiem (2015) found that group communicators who differed in entitativity influenced the confidence people had in thoughts about a particular attitude object. High entitativity led to more thought confidence and attitudes more reflective of those thoughts. This type of source credibility information (coming from the differences in entitativity) could be used as the validating factor in a setting where participants are asked to focus on the source or message, to see if content-dependent results occurred. Horcajo, Briñol, and Petty (2010) explored how majority vs. minority status of a source affected thought confidence, and in turn attitude formation. Future work on content-dependent validation (and content-independent) could manipulate evaluative focus and then using the minority-majority

status as the important part of the credibility manipulation. Self-monitoring has also been studied in the context of self-validation because of the different ways that source attributes interact with levels of self-monitoring (Evans and Clark, 2011). This research found a functional matching between self-monitoring and source attributes, which sounds similar to content-dependent validation. Additionally, the use of pro vs. counterattitudinal messages in the context of self-validation has been explored (Clark and Evans, 2014), where low or high source credibility has different validating effects on confidence depending on where the participants' original position on the attitude object is (and their motivation to either defend or bolster their existing attitude). Exploring whether content-dependent validation effects could occur with use of pro vs. counterattitudinal messages is worth looking at in the future.

It is important to identify contexts in which content-independent and content-dependent validation occurs because thought confidence is really important in persuasive situations. If two people have the same positive thought towards an attitude object, but one holds it with more confidence (and thus the thought is viewed as more valid), it is likely that that individual will go on to form a more certain attitude that lasts. The ability to produce these validation effects using more indirect, naturalistic scenarios has important implications in real world settings. People who use persuasion tactics in their jobs, for example, would be able to gain insight into what pieces of information should be made salient and what is necessary for someone to be persuaded by a particular source or a particular argument about a product.

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APPENDIX A
Stimuli for Argument Quality Manipulations

STUDY 1

WEAK VERSION:

Note: The first and last paragraphs in this are from the Before Election condition. The bracketed information is what would be used in the After Election condition

Edmond Chemical Company and Phosphate-Free Detergents: A Win-Win for Everyone

Along the campaign trail, one of Candidate Miller's stops was at Edmond Chemical Company, where he praised this Ohio company as being innovative in the development of new phosphate-free detergents. [David Miller gave his speech at Edmond Chemical Company, where he praised this Ohio company as being innovative in the development of new phosphate-free detergents.]

"I want to congratulate this local company on developing products that are good for their community in so many ways. Most notably, Edmond Chemical Company has developed a phosphate-free detergent that is becoming so successful because of its great benefits, and it is easy to see why:

Among the various brands of laundry detergents currently on the market, phosphate-free detergents are close to the best. To begin with, phosphate-free detergents clean virtually as well as other detergents, especially if clothes are cleaned less frequently, which people should do anyway to reduce detergent costs and help clothes last longer. Further, phosphate-free detergents are less expensive. By buying phosphate-free detergents, customers save as much as 1%. That might only be pennies per load, but across time and across the great state of Ohio that ends up being a lot of money that people can put toward other needs for their families.

Even more important, some people think that phosphate-free detergents may not pollute community groundwater as much as phosphate detergents. At least in large amounts, phosphates might contribute to production of some types of algae. In the right concentrations, algae can affect water quality and aquatic life. The phosphates can also make drinking water taste like filtered water. Although Ohio's water is among the safest drinking water in the country, removing these chemicals couldn't hurt. Further, phosphate detergents typically contain E.D.T.A., a chemical additive associated with harmful environmental consequences at massive amounts. Thus, it is wisest to use Edmond Chemical's phosphate-free detergents for household laundry.

If elected, I would spend my time in office working to support these home-grown Ohio companies that feed our economy by creating quality jobs for local citizens and helping to provide for future generations of Ohioans. I humbly ask you to support me in those efforts. Thank you very much!"

[Regardless of whether or not the current legislation is passed, I will continue to spend my time in office working to support these home-grown Ohio companies that feed our economy by

creating quality jobs for local citizens and helping to provide for future generations of Ohioans. Thank you very much!”]

STRONG VERSION:

Edmond Chemical Company and Phosphate-Free Detergents: A Win-Win for Everyone

Along the campaign trail, one of Candidate Miller’s stops was at Edmond Chemical Company, where he praised this Ohio company as being innovative in the development of new phosphate-free detergents.

“I want to congratulate this local company on developing products that are good for their community in so many ways. Most notably, Edmond Chemical Company has developed a phosphate-free detergent that is becoming so successful because of its economic and environmental benefits, and it’s easy to see why:

Among the various brands of laundry detergents currently on the market, phosphate-free detergent is clearly the best. To begin with, phosphate-free detergents are superior in cleaning power. They allow clothes to be cleaned less frequently, which not only reduces detergent costs, but also helps clothes last longer. Further, phosphate-free detergents are considerably less expensive than phosphate detergents. By buying phosphate-free detergents, customers save 30%, which is a considerable savings. That can amount to dollars per load. Across time and across the great state of Ohio that ends up being a lot of money that people can put toward other needs for their families.

Even more important, phosphate-free detergents pollute community groundwater significantly less than phosphate detergents. Phosphates produce excessive amounts of algae, which affect water quality and aquatic life. The phosphates can also make drinking water taste bad. The use of phosphate-free detergents keeps the drinking water safe and helps prevent death of aquatic life. Further, phosphate detergents typically contain E.D.T.A., a chemical additive associated with harmful environmental consequences even in small amounts. Thus, it is wisest to use Edmond Chemical’s phosphate-free detergents for household laundry.

If elected, I would spend my time in office working to support these home-grown Ohio companies that feed our economy by creating quality jobs for local citizens and helping to provide for future generations of Ohioans. I humbly ask you to support me in those efforts. Thank you very much!”

STUDY 2

WEAK VERSION

David Miller is a member of his local chamber of commerce who is interested in companies in his area that work to produce the best consumer products they can. Here is an excerpt from his recent speech about a phosphate-free detergent company:

“I want to congratulate this local company on developing products that are good for their

community in so many ways. Most notably, Edmond Chemical Company has developed a phosphate-free detergent that is becoming so successful because of its great benefits, and it is easy to see why:

Among the various brands of laundry detergents currently on the market, those that are phosphate-free are the best. To begin with, the packaging of most phosphate-free detergents is more attractive than that of other kinds of detergents. This is partly because of the colorful designs. Furthermore, because phosphate-free detergents look better, managers frequently locate them in places within the supermarket that are salient to shoppers. Perhaps for this reason, phosphate-free detergents have topped the charts in local customer satisfaction a couple of times.

By buying phosphate-free detergents, customers save as much as 1%. That might only be pennies per load, but across time that can add up to a lot of money that people can put toward other needs for their families. Even more important, however, is the fact that phosphate-free detergents weigh 5 % less than phosphate detergents. This makes carrying phosphate-free detergents home from the store much easier. In addition, the cost and weight savings come without giving up a clean scent for clothes, as 60% of local surveyed consumers rated the phosphate-free detergents as smelling as good as other detergents. Thus, it is wisest to use Edmond Chemical's phosphate-free detergents for household laundry.

STRONG VERSION

Same as strong argument for Study 1, except there is no last paragraph relating to politics, and the introduction is: [David Miller is a member of his local chamber of commerce who is interested in companies in his area that work to produce the best consumer products they can. Here is an excerpt from his recent speech about a phosphate-free detergent company:]

APPENDIX B

Stimuli for Evaluative Focus (STUDY 1)

Before Election:

The following information you will receive surrounds political communications and will ask you to put yourself in place of a citizen who is receiving the information.

[New Page] In every election, people receive information from and about the political candidates. Ideally, an informed electorate would be thinking carefully about that information and making as careful a decision as they can. Please approach the current election information in the way that a highly motivated and informed citizen would.

For the following information, imagine that you are a voter for an upcoming election. The election is coming soon, so you are interested in evaluating any information you can get about the candidates in the election.

David Miller is running for election to become a state senator. The following excerpt is from one of Candidate Miller's campaign stops, where he praises a local company, Edmond Chemical Company, for their innovation in the realm of developing and producing phosphate-free detergents. Please read this information closely, and think carefully about these materials. Your responses are important to us.

After Election:

The following information you will receive surrounds political communications and will ask you to put yourself in place of a citizen who is receiving the information.

[New Page] When politicians are in office, they still often communicate with their constituents about issues that are important to them. Ideally, an informed citizen would be thinking carefully about the issues of the day and making as careful of a decision as they can. We'd like for you to approach the current information in the way that a highly motivated and informed citizen would.

For the following information, imagine that you are a citizen in the state of Ohio. The issue of phosphate-free detergent will be considered soon in the state legislature, so you are interested in evaluating any information you can get about the policy.

David Miller has been a senator for 2 years. He recently gave a policy speech about his views on the use of phosphate-free detergent, as the usage of this product is something that he would support implementing in the state of Ohio. In the following paragraphs, David Miller praises Edmond Chemical Company for their innovation in the realm of phosphate-free detergents. Please read this information closely, and think carefully about these materials. Your responses are important to us.

**APPENDIX C:
Stimuli For Person And Message Judgment Tasks (Study 2)**

PERSON (EXPERTISE) JUDGMENTS:

Instructions: You will now be asked to complete a series of judgments

1. To what extent do you think Michael Jordan is likely to be an expert on coaching basketball?

1 not an expert – 9 very expert

2. To what extent do you think Oprah is likely to be a credible source on the topic of nuclear power?

1 not a credible source – 9 very credible source

3. Rick Smith has been in public office since 2001, and is running for a seat as County Commissioner. He previously attended Indiana State, and worked as a clerk for a small town for two years before he left for undisclosed reasons. During this time, he learned how to work with people during their most trying times. He believes that the most important issue in any society is a good system of prisons, and wants to fight for this by significantly raising taxes to build more regional prisons.

**How much expertise would Rick Smith bring to the position of County Commissioner?
Rick Smith is...**

1 not at all expert – 9 highly expert

4. To what extent do you think Ellen DeGeneres is likely to be a credible source when talking about the lives of celebrities?

1 not a credible source – 9 very credible source

5. Sylvia Roberts graduated with a degree in Ecology, and then pursued law to become an environmental lawyer. During her time in this career, she has researched the best ways to promote a green environment, and has dealt with cases involving this. In her discussions with the EPA about various tactics to help the environment, the idea of mandatory recycling has come about. This would involve a law implemented highlighting the specifics of what is to be recycled, and the consequences of not following the law. Mandatory recycling would be one step closer to reducing the pollution in the environment.

How would you rate Sylvia's expertise on the environment and the use of mandatory recycling?

1 not an expert – 9 expert

Please list one thought you had while reading this (Blank provided)

6. To what extent do you think Stephen Hawking is likely to be a credible source on a topic related to theoretical physics?

1 not a credible source – 9 very credible source

7. Dan Sullivan has a degree in biological sciences, and currently works for the Department of Agriculture. Here is an excerpt of a recent talk he gave about GM crops: "Genetically modified (GM) crops have had a positive impact on the world. There are numerous benefits, which I will now highlight. Genetically modified food crops benefit crop growth. As demonstrated by GMO-pioneer Norman Borlaug, crops can be modified to facilitate their growth in less-than-ideal circumstances. A particular concern among farmers is the loss of crops to insect pests. Biotechnology can be used to increase yields by creating genetically pest-resistant crops instead of drenching fields with pesticides that can have harmful effects on the health of people and the environment.

Genetically modified crops have economic benefits, especially in less developed countries. Genetically modified sweet potatoes have been predicted to increase farmer income by up to 30% for virus-resistant potatoes and up to 40% for weevil-resistant potatoes. Because GM crops require fewer pesticides, farmers can save money on both the costs of pesticides and on the labor necessary to administer the treatments. In addition, genetic engineering can benefit world health. Biotechnology can allow people to receive crucial medicines and vaccines that are difficult to distribute. By putting vaccines into food products, organizations can more easily transport and administer them to people in need. For example, a transgenic potato has been created that has immunized rats against both rotavirus and *E. coli*, two potentially deadly stomach diseases. This research demonstrates the potential for GM food to carry vaccines against infections by both bacteria and viruses."

To what extent do you think Dan Sullivan is an expert on the benefits of GM crops?

1 not an expert – 9 very expert

Please list one thought you had while reading this (x3)

8. To what extent do you think LeBron James is likely to be an expert on architecture?

1 not an expert – 9 very expert

MESSAGE (TOPIC) JUDGMENT TASKS

You will now be asked to complete a series of judgments

1. To what extent do you think it's a good idea to increase the use of Nuclear Power?

1 very bad idea- 9 very good idea

2. To what extent are there good reasons to institute mandatory recycling?

1 very few good reasons – 9 many good reasons

3. The idea of implementing a junk food tax arose from research on the costs of eating junk food. Some research has found that Americans receive nearly one-third of their calories from junk food, and has also found connections where people whose diets are high in junk foods showed an increased risk for diseases like diabetes. Implementing a tax would discourage the consumption of junk food, hopefully leading to reduction of the diseases.

How reasonable would it be to implement a junk food tax?

1 not at all reasonable – 9 very reasonable

4. To what extent are there good reasons to implement Universal health care?

1 very few good reasons – 9 many good reasons

5. What's the right age for a child to get his or her first cell phone? The answer varies from parent to parent. This much is clear: The average age seems to be getting younger and younger. When children have their own cell phones, it affords safety and convenience. A child can call home or emergency services if trouble arises when armed with a cell phone. From changes in after school pick up plans to making it easy to notify you when they have arrived where they are going, there's no doubt that the conveniences that come with an adult having a cell phone translates the same when it comes to cell phones for kids. Cell phones also allow children to learn responsibility while maintaining strong family bonds. A cell phone can teach children about responsibility, from taking care of the gadget to the minutes and text restrictions. Changing how you talk with your teen by texting, in addition to the new responsibilities you have allowed him or her, may be just the thing you need to connect with him or her on a different level.

To what extent are there compelling reasons for allowing children to have cell phones?

The reasons are:

1 not at all reasonable – 9 very reasonable

Please list one thought you had while reading this

6. To what extent is it good or bad to increase spending for the Military?

1 very bad- 9 very good

7. Claire Williams is a researcher who studies the effects of pollution and waste on the oceans and their ecosystems. Here is an excerpt of her speech she recently gave about what plastic bags should be banned from usage:

"Plastic bags for use by consumers in supermarkets and other stores should be made illegal. Consumers must accept that it is hugely wasteful, massively unethical, and potentially deadly to continue using plastic bags. Supermarkets must be told by the government that continued supply of plastic bags will result in large fines, while those supermarkets who remove all their bags can be rewarded. Plastic bag production uses almost 10 percent of the world's annual oil supply. The chemicals and compounds that go into making plastic bags could be utilized in a far more effective manner. In addition, they do not degrade well in our garbage dumps, so they will remain on this planet forever more. We cannot have this accumulation of plastic bags and the only way forward is to ban their distribution and use.

Not only do plastic bags fill up our landfill sites where they will remain forever more, but people also throw them into the streets and they also end up in oceans, accounting for a large amount of the floating marine litter. Plastic bags are responsible for the deaths of huge numbers of marine species, which mistake the bags for food. Plastic bags should be replaced with bags that we would not so readily disregard. By banning plastic bags, not only will we reduce all the environmental issues such as animals, litter and landfill, we will also spread awareness globally and even potentially nationally.

To what extent do you support a plastic bag ban?

1 I don't support it- 9 I support it

Please list one thought you had while reading this (x3)

8. To what extent do you support Capital Punishment?

1 I oppose it- 9 I support it